

81-06295

ODP #P1-1032

ER: 81-4844

5 August 1981

MEMORANDUM FOR: Director, National Foreign Assessment Center  
FROM: Deputy Director of Central Intelligence  
SUBJECT: Follow-up on DCI's Interest in Using Computer Assistance in "Crisis Management" and "Key Estimates"

1. You will recall that during March-April of this year, the DCI asked DDA and NFAC, respectively, about the feasibility of using computers in crisis management and of "computerizing key estimates." He wanted to be able to go to one place on short notice -- possibly shortly before leaving for an NSC meeting -- for up-to-date, factual information and analysis on key areas. Subsequent discussions between OPP, [redacted] and NFAC representatives resulted in the suggestion that CMASS (Crisis Management Analytical Support System) can accomplish the above on a small scale and has been used in a similar fashion to produce the weekly Central America Report for the DCI.

2. I would like to consider the Central America Working Group's use of CMASS as a pilot effort to see if CMASS can provide factual updates and analysis on high priority subjects on very short notice without analysts having to interrupt other work to compose such updates.

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[redacted]  
B. R. Inman  
Admiral, U.S. Navy

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DDA 81-0629/4

6 May 1981

MEMORANDUM FOR: Deputy Director of Central Intelligence

FROM: Max Hugel  
Deputy Director for Administration

SUBJECT: Crisis Management

REFERENCES:

- A. Memo for DCI via DDCI fr DDA, dtd 23 Mar 81, Subj: Your Inquiry to Me with Reference to Using a Computer Base Terminal System for Crisis Management at the DCI Level
- B. Memo for DDCI fr D/NFAC, dtd 23 Apr 81, Subj: Support to the DCI During Crises (ER 81-6812/2)
- C. Note for DDA fr IHSA/DDA, dtd 6 May 81, Subj: NFAC Memo to DCI Regarding Support of the DCI During Crisis, dated 23 April 1981

Bobby:

1. I have discussed references A and B (copies attached) with [redacted] 25X1  
the Agency Information Handling Systems Architect, and I attach herewith his note to me (reference C) in answer to the NFAC memo. [redacted] 25X1
2. I think the proposal that we have made has merit and is a good first step, at least from the standpoint of developing a prototype to see how this would work and the functionality of this system. [redacted] 25X1
3. Let me hear from you on this. [redacted] 25X1  
[redacted] 25X1

Max Hugel

Atts

DDA:MHugel:kmg (6 May 81)

Distribution:

Orig - DDCI w/refs  
1 - ER w/ref C  
1X - DDA Subj w/ref C & refs A & B as bkgd  
1 - DDA Chrono  
1 - MH Chrono

DECLASSIFY TO UNCLASSIFIED  
UPON REMOVAL OF ATTACHMENTS

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DDA President  
81-0609/3

G MAY 1981

NOTE FOR: Max Hugel, DDA

25X1

FROM: [REDACTED] IHSA/DDA

SUBJECT: NFAC Memo to DCI Regarding Support of the DCI During Crisis, dated 23 April 1981

Max:

It sounds to me like it is time for us to close the loop with NFAC--if you think this should be pursued--since the ultimate provision of any such functionality is their responsibility.

The only issue that seems to have been addressed in the memo is whether a computer-based system would help the DCI in a crisis situation. NFAC says not in paragraph 1, but it may be based on the presumption that the suggested system was solely for the DCI's use.

The remaining paragraphs talk to what NFAC needs to do its job better--a different subject.

There may be a couple of misunderstandings which I would like to correct, however. First is the possible presumption that this system is for solely for the DCI. Personally, I would view it as the crisis support system for the Agency's senior executives. I do not envision any one person interrogating a terminal in isolation, and then acting for the Agency on the basis of the information presented, again in isolation. I think the indicative menu of contents enclosed with my memo reflects this perspective.

The second is the use of raw data in the system, which was definitely not a presumption of the posited system. NFAC preparation of the input in the context of the Operations Center was postulated and the menu of contents reflected finished intelligence. Since there are all shades of "finished" intelligence, categorizing it is difficult. It is on the level of the President's Daily Brief, however--finished intelligence prepared in the Operations Center.

The enhancement of the NFAC analysis capability that is discussed seems to be keyed to SAFE, but is not clear. My memo posited a prototype system to be put up in six months on the

SUBJECT: NFAC Memo to DCI Regarding Support of the DCI During Crisis, dated 23 April 1981

Operations Center's minicomputer system. I don't think any large operational system to support senior executive decision-makers should be designed without first prototyping the functionality. That is the only effective way I know of to sort out such questions as the analyses required, the data organization, and the interfaces with policy options being explored elsewhere. A prototype environment permits a design, trial, and modify approach using the feedback of the DCI and other senior executives.

One final comment. On the basis of my limited knowledge, I am inclined to believe that the concept is not worthwhile unless a substantial part of the DDO's data is included. Since I do not believe that the SAFE environment will provide adequate security for this data, I think a standalone system is required, much like the current CMASS system. The security factors would have to be more stringent, however, similar to those for the DDO's IBM 4331 system. Thus, I do not believe the SAFE system is likely to be found to be a proper host for a senior executives information system. SAFE would, of course, provide the analyst support and thus much of the NFAC input data for such a system.

If NFAC wants to pursue this further, I think ODP should be a part to the conversations, since they are likely to have the design responsibility.



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31-68126  
2373-81

NATIONAL FOREIGN ASSESSMENT CENTER

WASHINGTON, D. C. 20505

Director

23 APR 1981

MEMORANDUM FOR: Deputy Director of Central Intelligence  
FROM : Director of National Foreign Assessment Center  
SUBJECT : Support to the DCI During Crises

1. NFAC has reviewed the DDA response to the Director's request for a computer based system to support him during crises. Although it is technically feasible to provide the DCI such support, an automated system for passing raw information probably would not significantly help the DCI fulfill his responsibilities during the crises.

25X1

2. CIA, and NFAC in particular, does have some real problems in organizing itself to support the DCI during crises. The screening of raw reporting, analysis of the fast-breaking developments, and issuance of timely situation reports to support the DCI are important tasks that become more complicated if the DCI is out of the building. At present, there is no central point where all significant and sensitive messages are received. Messages enter the system and get to the DCI in a variety of ways. Because of the major role of the DCI in policymaking it is particularly critical that NFAC provide a product that is relevant to policy needs. This requires sophisticated analysis, feedback from the DCI and other policymakers, and a constant exchange between NFAC and those developing policy options in the Department of State and contingency plans in the Defense Department.

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3. A major challenge to NFAC is to improve the ability of its analysts to receive, assimilate and analyze the large flow of information received during a crisis. The SAFE system is a step in this direction. The Office of Current Operations now has in operation an ADP system designed to support Task Forces during crises. NFAC can improve the support provided to analysts as well as sharpen their skills and organize the Task Forces more efficiently. We also can work to improve the exchange of information and analysis among the various intelligence components and the Operations Centers run by these components.

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SUBJECT: Support to the DCI During Crises

25X1 4. I suggest that Dick Kerr and I get together with you to discuss this further.

/s/ JOHN N. McMAHON  
John N. McMahon

## Distribution:

Orig - Addressee  
1 - DCI  
1 - ER  
1 - D/NFAC  
1 - DD/NFAC  
1 - NFAC Reg.  
1 - C/Ops Ctr/OCO  
1 - D/OCO Chrono  
1 - CM File

25X1 NFAC/OCO/RKerr:dlp  22 Apr)

## DDA Distribution:

25X1 1   
1 - DDA Subj

DDA 81-0629/1

21 April 1981

MEMORANDUM FOR: Director of Central Intelligence  
THROUGH: Deputy Director of Central Intelligence  
FROM: Max Hugel, Deputy Director for Administration  
SUBJECT: Crisis Management  
REFERENCE: Memo dtd 23 Mar 81 to DCI via DDCI fr DDA, subj:  
Your Inquiry to Me with Reference to Using a Computer  
Base Terminal System for Crisis Management at the DCI  
Level

Since I have not received any reply as yet to referent memorandum,  
I would appreciate it if you would let me know what the status is on  
this particular matter.

Max Hugel

DDA:MHugel:kmg (21 Apr 81)

Distribution:

Orig - DCI  
1 - DDCI  
1 - ER  
1 - DDA Subj w/bkwd  
1 - DDA Chrono (NO CIRCULA-  
TION)  
1 - MH Chrono

25X1

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DA 81-0629

23 March 1981

MEMORANDUM FOR: Director of Central Intelligence  
THROUGH: Deputy Director of Central Intelligence  
FROM: Max Hugel  
Deputy Director for Administration  
SUBJECT: Your Inquiry to Me with Reference to Using a Computer  
Base Terminal System for Crisis Management at the DCI  
Level

1. I am attaching a memorandum which I received from [redacted] with  
reference to the above subject which is self-explanatory. [redacted]

2. This would only be an interim solution, but it is a beginning. The  
problem that I see is how we can get the Directorate of Operations to agree  
to allow information that they work with to be part and parcel of the subject  
matter which is necessary to have in an overall system that would address a  
total system at times of crisis management. If this problem can be solved,  
then there is no question that we could take it to the next step of developing  
a centralized overall computer based system that will give you access on an  
instantaneous basis to any subject on all pertinent matters that you have  
indicated that you need for decision making. [redacted]

3. I believe that such a system at your disposal is absolutely essential  
and that, if you feel the same, we should now prepare for the development for  
the total centralized system which will require in-house resources. Please let  
me have your decision as soon as possible on two points:

- a) Whether we should go forward with the interim computer based  
terminal system, and
- b) Whether we should prepare to move forward on the more enhanced  
and more centralized system for crisis management for the DCI. [redacted]

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DOWNGRADE TO UNCLASSIFIED  
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24 MAR 1981

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MEMORANDUM FOR: Deputy Director for Administration

25X1

FROM: [REDACTED]  
Information Handling Systems Architect

SUBJECT: A Critical Data and Estimates IHS for the DCI

1. In response to your inquiry, a computer based terminal system to provide the DCI with current intelligence on critical items is practical and can be implemented in about six months.
2. The selected approach is to use OCO's Crisis Management computer system, which is a research system based on two PDP 11/70 minicomputers. A key reason for this selection is the natural association of the needed support function with the operational responsibilities of the Operations Center. Another is the immediate availability of implementation personnel who have recently developed functionalities for the Crisis Management System similar to what is needed for the DCI's system. The IHS portion of the development should be managed by ORD, which is responsible for this system.
3. The DCI's system should be considered a prototype system, and its scope constrained. It is anticipated that the ultimate system produced will serve command and control as well as information needs and will be substantially larger. To support such size appropriately and provide assured high availability, the system should be implemented on a central processing system, such as SAFE, the Ruffing Computer Center or the Special Computer Center. Soon after this prototype system is operational, ODP should be tasked to begin work on the design and development of an operational system.
4. Several management issues must be addressed before we undertake this development effort. First, the creation and maintenance of the necessary data base will entail a major investment on the part of NFAC. Second, the data accumulating in either the prototype or follow-on operation system will have a level of sensitivity which will require extraordinary security and compartmentation measures. Third, although contractor personnel may develop the prototype system, the operational system will be the province of ODP, whose applications development resources are already stretched to their limits.
5. A more detailed development of the assessment is attached.

25X1

cc: Bruce Johnson

Attachment:  
As Stated

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## 25X1 ASSESSMENT OF AN IHS FOR CRITICAL DATA AND ESTIMATES FOR THE DCI

1. A computer-based system to make available critical data and estimates to the DCI on a real time basis can be readily provided. On a quick look basis, it is estimated that this could be done within six months, with suitable priorities. If such an early availability is sought, the critical path item will probably be the determination of the exact report formats required, and their implementation in software. (The organizational development to report the DCI's system should be done in parallel with their efforts to avoid extending the IOC data.)

2. There are three possible facilities for providing this service in the near future: The DEC PDP 11/70 minicomputer supporting the OCO, the Ruffing Computer Center (RCC) facility, and the Special Computing Center. Ultimately, the system should probably reside on SAFE, but the availability of that facility is at least two years away. My appreciation is that the organization best suited to support this new database for top-level decisionmakers is the OCO, because this function is a logical extension of this Office's current responsibilities. In the Crisis Management Center, they track and report on the current crisis situations, using direct cable and data inputs and

operating in a real time information systems environment. In addition, the functionalities of this facility are an ideal match to the need, and there is readily available software development personnel who are thoroughly knowledgeable concerning the facility. As a consequence, selection of their office and the supporting PDP 11/70-based research system is recommended for this modestly sized, quickly implemented system. The database would be supported on a continuing basis by an NFAC adjunct of these existing OCO organizations.

3. The capabilities to be expected are as follows:

- Real time access of data using a powerful easy-to-read visual display unit (VDU).
- Powerful annotations and message handling facilities including:
  - Viewer has an unlimited annotation capability on the right-hand side of text or report data;
  - Messages of inquiry or tasking may be sent;
- The database can be updated continuously by an adjunct of the OCO's Operations Centers operation.

If the Delta Date 7260 terminals replace the Ann Arbor terminals currently used with the system, some additional programming would be required to provide the right-side annotation facility unique to the Ann Arbor.

4. The database requirements are estimated to be more extensive than is implied by the thought of 40 or 50 hot issues, but not large. It should easily fit on one, dedicated 176K megabyte disk. A quick look at the system functional requirement indicates a menu-driven architecture, providing facile user flow to the information category of his concern. Since this menu-driven architecture is also the architecture of the current software system, quick implementation is facilitated.

An assessment of the scope of the database was made on the basis of the understood objective and the menu-driven approach. Based on the premise that the DCI will want to evaluate decision alternatives in response to events in the world, certain current status information is also considered to be highly desirable. Such information provides support to the process of determining alternative responses or changes in plans that are available, either in response to unforeseen events or should current events provide heretofore unanticipated outcomes.

Attachment 1 presents the top-level menu hypothesized

for the database. This is the type of data believed necessary to support DCI decisionmaking. It can be seen that the data requirements are likely to be more substantial than might be initially anticipated, even for this small prototype. As a consequence of a primitive database sizing estimate, it is estimated that one additional disk drive dedicated to this database will be required in the PDP 11/70 facility, and the core memory of the B-computer cpu should be increased to the 384K bytes of the A.

5. The implementation considerations are as follows:

- The screen format, data format, and data entry methodology defined by the NFAC operating organization and approved by the DCI;
- The software can be readily developed by the resident SAI contractor personnel whose workloads are tapering off, but slight augmentation in the current level of effort will be required. The system will be implemented in "C," a structured HOL, similar to PASCAL, which has been used for the rest of the software;
- Immediate order of an additional disk drive and expanded core memory for the B-computer

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• The prototype facility development should be placed

under the cognizance of ORD, which is the Agency office originally and currently responsible for the development of this facility.

6. It should be recognized that the OCO minicomputer facility is strictly a research facility. Its sole application is the CMASS, used in the sixth floor Task Force Area. Its use is not required; it is an optional facility for the ad hoc crisis teams that are assembled to deal with a particular situation. The computer facility is generally not used in the Operations Center on the seventh floor.

Only one of the cpu's is used for operational purposes at a time, accessing to the 176K megabyte disk. The other has been idle, serving as backup. A second UNIX OS license has just been transferred to this facility, so all future development work will be transferred to the second machine. With acquisition of one more disk drive and increase of the core memory size in the second machine to that of the first, there should be entirely adequate capacity to accommodate the DCI system.

Since the computer facility is designed to evaluate new functionalities, it incorporates equipment and software packages from a variety of manufacturers, almost none of which are

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supported by ODP. As a consequence, comparable reliability/availability to that available from the central facilities cannot be expected.

7. The recommended approach should be considered to provide a prototype system, which will be constrained in terms of scope by the limitations of the host facility. An application-specific design should also be developed, based on experience with this prototype. It is my estimate that such a system will be much larger than the prototype, both in terms of the applications software and the database.

In no way should the OCO facility be considered to be lacking in sophistication, however. It uses the UNIX operating system, which is one of the most powerful and modern available today. It also has an eclectic family of powerful utilities, including the RAND word processing package. Since UNIX and these facilities are not available on the RCC equipment, the capability cannot be transferred over to achieve a quick implementation on a central facility of the CMASS.

8. The security of the database is a problem which must be addressed. Modifications of the current CMASS environment in which the contractor has access to the database will clearly be required. The assured exclusion of contractors to the database

must be provided, and effective compartmentation also assured.

9. These estimates are strictly based on a quick look at the problem. If the capability is attractive, a more detailed evaluation should be performed and developed. The total program plan and budget should be developed by NFAC since their office will be responsible for the user requirements, database creation and maintenance, and operation of the system. NFAC will need ORD's support on the planning as well as the implementation.

First-Option Menu

1. High Priority News and Pointer File (news not more than X hours old;  
Pointer File indexes other categories as appropriate);

2. Action Cables (outgoing) (not more than X hours old);

STAT

3. Covert Projects Status;

7. I & W Issues (e.g.: alert status, positioning, deployments, others);

8. Terrorist;

9. Status of Communications [redacted] (failures, degradations, STAT  
and remedial plans only);

10. Overseas Agency Personnel Assets: (type and location);

11. Overseas-Sited Physical Assets: (type and location); and

12. Overseas Mobile Physical Assets: (type and location).

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